

# JOURNAL of MAINEEMS

JULY 2008



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## Sharing the Challenges of EMS

How nice it is that several months have now passed without our having to shovel snow! The summer we could only dream about when the snow banks covered many windows, and some homes, is here at last. Woo-hoo!

### EMS Management

I've often said that one of the best parts of my job is when I get to attend a national conference where other state directors are present. It is one of the few times when I am with other folks who know first hand the challenges of this position. It is an opportunity to share our best practices and our various challenges. King Solomon wrote that there is nothing new under the sun, and being in a room with colleagues from many different area codes who struggle with many of the same issues, reaffirms that statement.

The same can be said with EMS service chiefs and directors. The challenges of being responsible for an EMS service are daunting, and not for the faint of heart. People in these positions come from a variety of backgrounds: some are experienced EMS providers, some come from municipal government, others from the private business sector. But

they very quickly all have two things in common: managing an essential public safety agency that will be called upon 24/7 for who-knows-what and struggle for essential resources.

To help establish a network where EMS service chiefs and directors can get formal training in this unique and complex responsibility, on April 11, Maine EMS began a series of EMS Management Training Programs that will be delivered during the coming year. This EMS Management Program was developed by the New England Council for EMS (with active participation from all six states) and funded by a grant from the New England Rural Health Roundtable.

The response to this program has been everything we hoped it would be, and then some. The lead instructors for the first session initially asked that we limit attendance to 24 students. But as the registration forms started arriving, we bumped that number to 35, and then finally capped it at 50.

The first session was an energetic, interactive day that focused on state and federal regulations and requirements, and EMS leadership at the service level. The second session, which was conducted on June 19 to another capacity audience included: Human Resources, Recruitment and Retention, and Policies and Procedures.

We will now take a break for the summer and resume sessions in September on finance, billing, budgets, purchasing, public relations, and lots



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### Contributing Editors

#### Editorial Chairman and Special Articles

Kelly Roderick  
kr8264@gmail.com  
141 Fairfield Street  
Oakland, ME 04963

#### Copy Editor

Nancy McGinnis  
PO Box 336  
Hallowell, ME 04347

#### Maine EMS

Jay Bradshaw, EMT-P  
152 State House Station  
Augusta, ME 04333-0152

#### Maine Ambulance Association

Tim Beals, MBA, EMT-P  
PO Box 202  
Waterville, ME 04903-0202

#### Maine ACEP

John R. Saucier, MD  
Maine Medical Center ED  
22 Bramhall Street  
Portland, ME 04102

#### Maine ACS/MCOT

Robert Winchell, MD, FACS  
887 Congress Street  
Suite 210  
Portland, ME 04102

#### Maine ENA

Tammy Lachance, RN, BSN, CEN  
Central Maine Medical Center  
300 Main Street  
Lewiston, ME 04240



more. Our goal is to finish these modules in the Spring of 2009 and, provided we are able to secure the necessary funding, we hope to continue to offer these sessions in the future.

### Public Relations

One of the most common and important recurring issues we face, as a state agency, a statewide EMS system, and local services, is public relations.

Over the past several months, services have gone through budget committee reviews, sometimes heated municipal council meetings, and votes by the taxpayers that determine the funding for the coming year and in some places, which EMS service (if any) will provide emergency coverage.

Having been in EMS for more than 25 years and attended at least that many town meetings, I have come to believe that while there are people out there who feel it is their calling to be human obstacles to progress, they are (thankfully) in the minority. The majority of folks know very little about what we do. Their understanding is sometimes limited to knowing that when they call 9-1-1, help arrives.

I submit that most people simply do not understand how an EMS system works, or what happens after they place an emergency call. It has been our experience that these same people become steadfast supporters once they know about: the dispatchers who take the call and begin pre-arrival instructions; the EMS crews who respond, treat, and

transport; the emergency department staff and the network of specialty care at tertiary hospitals.

But they won't know unless we tell them.

The same thing happens at the system level with our Legislators and, dare I say it, with many EMS providers who only see an end product and don't realize the work that took place.

- The little protocol book that fits in a pocket represents thousands of hours of work by physicians, educators, state and regional staff, and EMS providers of all levels over the past year.
- The trauma system that exists because of the deep commitment of the local hospitals and trauma centers and the emerging cardiac system that involves many of these same institutions and practitioners.
- ...and enough other examples that could, and probably should, fill a Journal.

The success of our system is largely due to the network of folks who are involved in many Boards, committees, and work groups. We extend our heartfelt thanks to those who are involved and an open invitation to those who would like to be.

Hope you have a safe and enjoyable summer. I'll see you in a few months.

## Why Should We Pay Attention to Chapter 1?

By Daniel Limmer, EMT-P

As a group of educators, the majority of us should admit from the start that we don't read chapter 1. If we were to take an alphabet course tomorrow we would skip the chapter that begins "Introduction to..." Why? We want to go for the meat and potatoes of the topic. We in EMS are a "read chapter 12 first audience" (or at least the one with the grossest photos).

So, as a group of educators, if we don't value chapter 1 personally, our students likely won't get a strong message about some surprisingly important concepts.

If we were to look at chapter 1 in an EMT book (which universally correspond to lesson 1-1 of the EMT-B curriculum) we would find within this seemingly insignificant chapter, the roles, responsibilities and traits of an EMT. This is where the statements "maintain a professional appearance" and "keep the rig clean and ready for the next call" reside.

My father was in the hospital recently. In each hospital room was a small whiteboard with a big purpose. It listed the names of the RN, LPN and NA responsible for that room. It also displayed the date, which is important if one is in the hospital for any amount of time. The days blend together.

After spending several days in the hospital I began to notice an apparent correlation. The days the whiteboard was up to date my father seemed to get better, more attentive care. Days I walked in and it was shifts (or days) old...well, you can guess what the care was like.

I studied this and thought about it every day. And I thought about how it may relate to those roles, responsibilities and traits of the EMS provider. And I'll admit that while I never was a slob and I keep my rig clean, I did occasionally think the patients were just happy to get good, personal care and that these alleged little things were less important.

I was wrong.

Those little things do make a difference and set a baseline for what your patients expect. It is time to change our opinions on chapter 1. Think about new ways to get this important information across to your students. They'll be waiting for what they perceive as the important (aka gory, cool) stuff. I got a real life reminder that the important stuff really does start in chapter one.

# Rapid Evolution In Pre-Hospital Cardiac Care

Michael Gibbs, MD, FACEP, President, Maine ACEP, Chief, Department of Emergency Medicine, Maine Medical Center

Mathew Sholl, MD, FACEP, ACEP Representative, Medical Direction Practice Board, EMS Medical Director, Maine Medical Center

As emergency medical services (EMS) evolves, we continue to learn the importance of pre-hospital care in time critical injuries or illnesses. The historical model of this sentiment is best exemplified in the care of patients suffering significant injury. Indeed, the very genesis of EMS in the U.S. emanated from a federal recognition of the high mortality due to motor vehicle crashes after the creation of our interstate highway system. Many steps have been taken to give EMS providers the sophisticated tools required to deliver state-of-the-art trauma care across the country. The focus on early trauma care training, lessons learned from our colleagues in the military, energy devoted to trauma systems development and regionalization have coalesced to create a system rarely rivaled.

With the newest iteration of the Maine EMS protocols due in July of 2008, pre-hospital cardiac care will rise to a level of importance that trauma care once held in exclusion. Since 2001, modern medicine has been evolving its understanding of the care of patients suffering from acute coronary syndromes and, in particular, ST segment elevation myocardial infarctions (or STEMI's). Based on a wealth of evidence, current best practice is to open the blocked coronary vessel of a patient with a STEMI as quickly as possible with a thrombolytic in less than 30 minutes or a PCI ("percutaneous coronary angioplasty") in less than 90 minutes from first medical contact. As with the military's golden hour, modern medicine is now wrestling with the best means of getting STEMI patients the treatments they need within this critical window.

The July 2008 protocols will introduce a number of initiatives aimed at this vulnerable patient population. Once implemented, all ALS level services will be required to have 12 lead EKG capabilities. Providers will be expected to perform a 12 lead EKG on all patients with non-traumatic chest pain. Paramedics will be expected to interpret these electrocardiograms for evidence of ST segment elevation myocardial infarction; intermediates will be asked to pass them on to down-stream providers for interpretation. If a STEMI is recognized, EMS providers will be expected to contact their receiving hospital in an effort to rapidly activate lo-

cal STEMI protocols. This effort should expedite STEMI recognition and management significantly.

Many providers have likely heard of programs within Maine and outside Maine that allow paramedics to activate a hospital's cardiac catheterization lab from the field. To date these have been based exclusively at centers capable of performing urgent coronary angioplasty. While these programs are exciting and hint at a system of cardiac care that may at some time mimic that of the U.S. Trauma Center network, much work remains to be done to develop the systems to support them. We would like to emphasize a few critical points for providers interested in maturing cardiac care and STEMI recognition in their region:

1. Change should begin at the local level. As we work together to develop an effective cardiac care network it will be vital for EMS agencies to work closely and effectively with local hospitals deeply invested in the care of their patients. Existing State EMS bodies will also play a significant role.
2. Effective training and oversight of pre-hospital ECG interpretation is of the highest importance. Efforts invested on the front end will ensure success of our entire care system.
3. Physician medical direction in close partnership with EMS agencies will be vital to guide the growth of systems throughout our region.

Pre-hospital cardiac care is evolving rapidly in new and exciting directions. With the unrolling of the 2008 protocols, Maine can prepare for a sophisticated level of care never seen before in our state. Along with the technology and education upgrades needed for success, a service's relationship with their receiving hospital must be potent and robust in order to meet the requirements of these new protocols. Indeed, the bridge formed between an EMS system and their receiving hospital is perhaps the most important upgrade in effecting patient outcome.



## Board of EMS

*Standing (L-R): Chief Roy Woods, Caribou; Dr. Peter DiPientranantonio, Brunswick; Jim McKenney, EMT-P, Presque Isle; Ron Jones, EMT-P, Westbrook; Bob Hand, EMT-P, So. Paris; Jim Ryan, Hampden; Joe Conley, EMT-P, Scarborough; Chief Wayne Werts, Auburn; Rick Doughty, EMT-P, Levant; Paul Knowlton, EMT-P, Bangor; Dr. Steve Diaz, State EMS Medical Director, Waterville.*

*Seated (L-R): Melissa Reynolds O'Dea, Esq, Asst. Attorney General; Ken Albert, Esq., RN, Lewiston; Geneva Sides, RN, St. Albans; Judy Gerrish, RN, Dover-Foxcroft; Steve Leach, RN, EMT-P, Union; Tim Beals, EMT-P, Winslow; Lori Metayer, RN, EMT-P, Lisbon.*

# Kennebec Valley News

## A Fond Farewell

KVEMSC bids farewell to Bill Page who retired on July 1, 2008 after over 30 years in public service. Bill served as Fire Chief in Winslow and then became the first chief in the area to oversee two departments when he became the Chief of Waterville Fire. Regionalizing of two departments was challenging and exciting for Bill. He also has served on the Maine EMS Board representing KVEMSC, and has been a very active member of the KVEMSC Executive and General Councils serving in each executive officer positions over the years. Bill is a licensed EMT Basic and has worked hard to see that EMS here in Maine continues to grow and advance.

Bill will be spending time with his wife and family, including his ever active grandchildren. He plans to spend time hunting and fishing and will follow those passions in a new adventure working as a Maine Guide with his brother.

Good luck Bill, relax and enjoy your time...you deserve it. We'll miss you.

## Award Ceremony

The William Thomas Hyde Award was presented for the 5th year on June 5, 2008. This year we honored Bill Page, EMT-B and Fire Chief. Bill was a

close friend of Tom and was his riding buddy on the Maine Lung Association Trek Across Maine. Bill was the obvious choice for this year's award as he clearly fills the qualifications by being a leader and public safety provider, is dedicated to his family and because of his strong desire to teach and lead others.

Bill's family was present at the Annual Meeting as he was honored with this award; it was a touching moment for all who were present. Congratulations Bill, Tom would be proud of you!

## Programs Abound in Region 3

If you are looking for specialized training related to EMS please contact our office or check out our website as we have a number of specialized programs scheduled or soon to be scheduled. Programs include GEMS, PEPP, ACLS for Basics, Provider Safety, Tactical EMS and much more. Check us out on [www.kvems.org](http://www.kvems.org) or call us at 877-0936. If you are not already a member of the email list-serve for KVEMSC send an email with your full name and email address to [office@kvems.org](mailto:office@kvems.org) and put KV Pulse in the subject line.

# Maine Task Force One

Maine Task Force One (ME TF-1) is a disaster response asset that is comprised of physicians, nurses, physician assistants, EMS professionals, and support staff from all over the state. John Bastin MHS PA-C NREMT-P is the Team Commander for Maine Task Force One and Josh Frances is the Deputy Team Commander. Other team leadership positions include

Medical Director: Steve Diaz, MD

Training Officers: Michelle Gosselin and Barry Worthing

Administrative Officer: Kris Gammon

Public Information Officer: Eric Sawyer

The primary mission of the Task Force is to deploy in support of state response assets during a medical surge event, such as a mass casualty incident. Other responsibilities include providing medical support at mass gatherings, augmenting hospital staffing during a medical surge event, responding to terrorist incidents, and supporting the state's public health system during disasters or disease epidemics. In addition, the team currently has ten members who have been trained as Tactical Medics.

Equipment assets include a Zumuro Inflatable Shelter that is capable of supporting 8-10 litter patients, a cache of antidotes and force protection drugs, as well as consumable and durable medical supplies. All supplies

and equipment are ready for rapid deployment and are transported to incidents by the ME TF-1 Response Vehicle.

ME TF-1 is funded by the Department of Homeland Security through the Northern New England Metropolitan Medical Response System at Dartmouth Hitchcock Medical Center, Lebanon New Hampshire. Locally ME TF-1 is supported and managed by the Maine Emergency Management Agency (MEMA).

ME TF-1 has been active since February 2007 and currently has 40 members. The team meets on a monthly basis at either Central Maine Medical Center or Maine Medical Center for a team meeting and team training. The team has deployed in support of the 2007 Great State of Maine Air show and the Annual Lobster Dip sponsored by the Maine Special Olympics at Old Orchard Beach New Years Day 2008. ME TF-1 is currently preparing to deploy to the 2008 Great State of Maine Air Show where they will augment and support the military medical assets in place for the event.

For additional information membership or if you would like to arrange a presentation for your service please contact John Bastin at [bastinj@cmhc.org](mailto:bastinj@cmhc.org) or Josh Frances at [FRANCJ2@mmc.org](mailto:FRANCJ2@mmc.org).



# EMS Across the Pond

## Introduction

Annually, a small group of ambulance personnel from Northern Ireland and the Republic of Ireland, travel to Boston and then onwards to the Maine EMS conference in Rockport. This educational exchange has been going on for some years now and is funded primarily through generous donations from North American benefactors interested in expanding international relations and exchanging knowledge, good practice and individual expertise.

This year I was selected to represent the Northern Ireland Ambulance Service (NIAS) and agreed to pen a short article to capture my thoughts and observations from the trip. Anyone from here will be laughing already, knowing that I am incapable of writing a short anything!

The plan for the article is to introduce myself and set the regional Northern Ireland context. Then I will briefly describe our local interpretation of national guidance on Continuous Professional Development (CPD) for paramedics. The rest of the article will be devoted to a brief anecdotal meander through my American experience – one I forced myself to undertake in the name of good CPD!!

## Personal Context

My name is John Wright and I am the Rapid Response Vehicle (RRV) Project Manager. I have worked for the ambulance service since joining the non-emergency Patient Care Service (PCS) in September 1986. Transporting elderly and infirm patients to various outpatient and routine appointments is an excellent way to learn how to deal with people and the routines of health service operations. I was one of those hugely keen guys with no patience and was lobbying to get onto Accident and Emergency work from the first day. I became an Emergency Medical Technician in 1988 and then an NHS Paramedic in 1990. Following 9 years as a Paramedic and Paramedic Supervisor I moved over to the 'dark side' and became an Officer. My current occupational focus is NIAS response time performance, more on that shortly.

## Organisational Context

To set the scene: NIAS is a regional Health & Personal Social Services (HPSS) Trust which provides Accident and Emergency (A&E) and Non-Emergency Ambulance services for the 1.7 million people of Northern Ireland. The Service receives 999 Emergency calls, Urgent calls on behalf of General Practitioners, and pre-planned ambulance requests. All of these calls are then responded to by tasking appropriate units.

We provide patient assessment, patient treatment, and then transport to hospitals and other health facilities.

Last year NIAS responded to over 103,000 Emergency, 36,000 Urgent and 225,000 non-urgent transport requests. During the year, over 300 NIAS A&E ambulance vehicles, RRVs and transport minibus-type ambulances traveled in excess of 5.4 million miles.

The service operates from 32 ambulance stations, and a further 10 sub-stations, throughout Northern Ireland. These locations provide a base for the 1040 NIAS staff and their 300 vehicles. There is a Regional Ambulance Training Centre (RATC) located at headquarters in Belfast, and small Stores and Maintenance Departments also based in Belfast.

## Operating Context

Northern Ireland has an area of 5,600 square miles, and is traversed by approximately 15,500 miles of roads. It is divided for health service purposes into four areas. NIAS has four divisions which mirror the four Area Health Boards – North, East, South, and West. *See graphic on the next page.*

In simplistic terms, most public health services in the UK are free at the point of delivery, including ambulance services. This means that traditional economic market forces play less of a role in the success of individual public service organisations. In place of these market forces, public health services are performance-managed using targets, standards, monitoring, and layers of responsibility and accountability.





Health Board	Population Count (2001 census)	% of Total Population
Eastern	665,968	39.5
Northern	426,965	25.3
Southern	311,119	18.5
Western	281,215	16.7

NIAS Chief Executive is the Trust Accountable Officer and represents the Trust Board when reporting through senior civil servant ranks up to the local Health Minister.

The Health Minister sets a range of 'Priorities for Action' (PfAs) for the local health service as a whole, and each Trust has to comply with those PfAs relevant to themselves. PfAs are targets that are designed to show organisational and clinical effectiveness and which often include measures of financial efficiency and achievement of value for money.

This year's primary PFA target for NIAS is to have a response en-scene at 70% of our Category A Immediately Life-threatening emergency calls within 8 minutes.

This is an extremely challenging target due in part to the rural nature of Northern Ireland's geography and the sparseness of its population – which is a familiar story to many Maine readers I am sure. Though beyond the scope of this article, our efforts to tackle the challenge include the afore-mentioned Rapid Response Vehicles (cars crewed by a lone-working Paramedic), multiple deployment points, the introduction of any and all relevant technology (e.g. Vehicle Tracking, Satellite Navigation, Status Plan Management, Mobile data, automated paging) and so on. In the future NIAS will probably develop systems of lay-person Community First Response also.

### Continuous Professional Development (CPD)

Any ambulance service no matter how big or how small, whether rural or urban, whether salaried or volunteer based, requires a number of fundamental elements including Fleet, Estate, Communications, appropriate Organisational Structure and most importantly people.

Apart from a small HQ / Support Staff cohort, the majority of NIAS employees (85%) are operational Ambulance Care Assistants (who work on the Patient Care Service high-dependency minibus type ambulances), Emergency Medical Technicians or Paramedics. Currently only the Paramedics have a statutory obligation to be registered with the Health Professions Council (HPC).

It is this obligation to be registered with the HPC that underpins the professional credibility of NHS Paramedics and that is driving the way to modernisation of the job role and the organisations involved.

NIAS recognises that its clinical personnel in particular, work in a fast moving environment and in order to continue to provide responsive services that are safe, clinically current, flexible and forward thinking, it is important that they

have the skills and knowledge required to fulfill their potential and contribute to the modernisation agenda.

The importance of maintaining regular investment in training for staff has always been accepted within NIAS, but traditionally it was delivered using a system of top-down spoon-fed short courses approach which tended to be fairly inflexible, fairly unchallenging and already old news by the time everyone completed one of the annual courses.

However, since 1998 and the publication of the Department of Health's paper A First Class Service: quality in the new NHS there has been major developments in NHS policy on education, training and development. With the emphasis on providing a quality service, the Government has identified the importance of developing an environment where lifelong learning forms a major part of the training and education strategy. Continuous Professional Development (CPD) that is undertaken and evidenced is one vehicle which will help achieve this.

HPC standards say that registrants must:

- Maintain a continuous, up-to-date and accurate record of their CPD activities;
- Demonstrate that their CPD activities are a mixture of learning activities relevant to current or future practice;
- Seek to ensure that their CPD has contributed to the quality of their practice and service delivery;
- Seek to ensure that their CPD benefits the service user; and
- Present a written profile containing evidence of their CPD upon request.

While CPD is the responsibility of each individual, NIAS aims to encourage its staff to maximise their individual contribution to the achievement of the Trust's objectives. Training needs are to be prioritized and a plan developed to meet them, either on an individual basis or collectively as part of the Trust's annual training plan. CPD allows the Paramedic to also identify his or her own training needs and take responsibility for their own development. This can be achieved through:

- Reading articles – journals, internet, books
- Discussions – colleagues, other healthcare professionals
- Self reflection – calls (what worked well and what didn't)
- Maintenance of skills
- Training courses
- ....or visiting America!

*Read about author John Wright's visit to Boston, Lewiston and Rockport in the next issue of the Journal of Maine EMS, published this coming October.*

# Twelve Tips for 12 Leads

*This article is a reprint from the Journal of Maine EMS, Volume 15, Number 2 (2005) and is intended to be a helpful companion to those of you taking 12-lead EKG training for the first time and a refresher for those of you who have already received 12-lead training.*

Services all across the state are getting in on the 12-lead excitement. Providers are taking 12-lead classes to learn to interpret cardiograms, talking to each other about axis deviation, ST segment elevation, and contiguous leads. But before any 12-lead can be interpreted, it needs to be obtained. And the tracing must be a good one for it to be meaningful. The following tips will help with the process of obtaining a good tracing.

## 1. Location, Location, Location

Look at any textbook that talks about obtaining 12-lead EKG's and every single one of them will show you proper placement of EKG leads. So why, then, do we so often see patients with their V1 and V2 leads placed just below the clavicles, or V4, V5, and V6 sitting on the patient's abdomen?!

Remember, the electrocardiogram is looking at electrical activity moving from one pole to another, so if the leads are not placed where they belong, the tracing will not show an accurate representation of that activity!

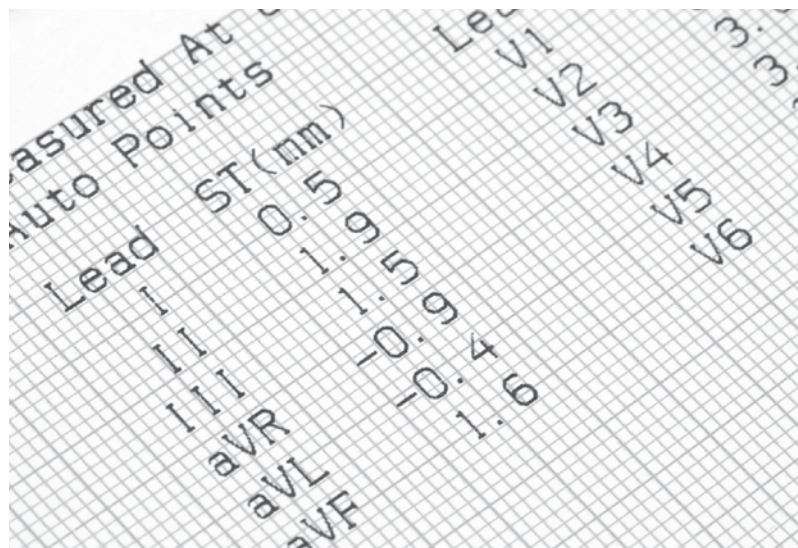
## 2. Limb Leads

There is much disagreement in the literature about the best location for the limb leads. Some resources say they must be placed distally on the limbs (wrist and ankle), some say it doesn't matter if they are distal or proximal as long as they are on the limbs. Some say they can be on the trunk as long as they are far enough from the heart. Some resources say it's better to place the leads over bone because you get less muscle tremor, others say to place them over soft tissue and recommend that they not be placed over the bone.

In general, however, the four limb leads should be placed on – guess what – the four limbs! You should place them on soft tissue, not directly over bones. The soft tissue of the medial surface of the calves and the meaty area in the middle of the forearm are ideal. (In situations in which you can't, or choose not to, use those distal areas, for example, on a patient with Parkinson's who can't control his tremors, the best you might be able to do is to make sure that your limb leads, while on the trunk, are as close to the corresponding limbs as possible.)

## 3. Chest Leads

While there may be much debate about the placement of the limb leads, there is universal acceptance that the placement of precordial (chest) leads is extremely important and must be precise, correct, and



consistent. For example, if you want something that's going to view the electrical activity moving toward the septum and anterior portion of the heart, you need to have your leads placed directly over the septum and anterior portion of the heart. So leads V1 and V2 need to be placed at the fourth intercostal space, V1 immediately to the right of the sternum and V2 just to the left.

To find the fourth intercostal space for V1 and V2, start at the space just below the clavicle, which is the first intercostal space, and palpate down (yes, you must actually touch the patient's chest) to the second, third, then fourth space. Alternatively, you could feel for the "bump" on the sternum, the angle of Louis, which sits at the second rib. Immediately lateral to the angle of Louis is the second rib, and just inferior to that is the second intercostal space; you can continue to count down from there.

You skip V3 at this point, and place V4 next. V4 goes at the mid-clavicular line in the fifth intercostal space. Put your fingers on the middle of the clavicle to get a sense of where the midclavicular line is. Now go back to where you put V2 and move down one rib to the fifth intercostal space and follow that to the midclavicular line, then put V4 there. (Don't let anybody tell you V4 goes just below the nipple line. While it may work for most men, in women nipple lines tend to migrate downward and outward as they age, and therefore the nipple line can't be used as a consistent landmark!) Next, V3 is going to go directly in the middle of the imaginary line between V2 and V4.

Again, you're going to skip V5 and go to V6, which gets placed in the midaxillary line at the fifth intercostal space. V5 then goes directly in the middle of the line between V4 and V6, which just happens to be at the anterior axillary line.

One mistake many people make is to curve V5 and V6 upward toward the axilla, as if to circle around the breast like an underwire bra. This



puts V5, and especially V6 too high for correct placement. V4, V5, and V6 should all be in essentially a horizontal line.

Another mistake people make is to want to keep all the electrodes equidistant from each other. Remember your landmarks and you won't fall into that trap.

#### **4. Mama Mia!**

Women, of course, present a bit more of a challenge than men do because of their breast tissue that often gets in the way. You do need to remove a woman's bra and lift her breast out of the way in order to place the stickies, especially V4 and V5. If you are uncomfortable about touching her breast, or afraid of making her uncomfortable when you do so, you might try placing a sheet across her upper chest before you begin placing the leads, then you can lift her breast up with the sheet as a barrier between your hand and her skin. Other suggestions are that you ask the woman to lift the breast herself, or use the back of your hand, instead of your palm, to lift the tissue.

The question always comes up as to whether V4 can be placed on top of the breast tissue itself, or whether the breast must be lifted for placement of the electrode directly onto the chest. As a general rule, you should place the sticky on the chest wall, not on the breast tissue, as breast tissue tends not to stay in one place if the patient should move.

#### **5. Keep it Clean!**

The patient's skin needs to be clean, dry and free of lotions, powders, and sweat. This takes on more meaning when you consider that the patients we're seeing, many of whom are having chest pain, may also be diaphoretic. Remember, also, that a lot of elderly patients have very dry skin, especially on their lower extremities, and their dry flaky skin will prevent the electrodes from sticking. Also, a lot of patients use lotion to counteract their dry skin, and that lotion will interfere with the ability of the electrodes to stick.

Start by seeing if the electrodes will stick without any special treatment. If they do, then you're good to go. If they don't, try cleansing the skin briefly with an alcohol prep pad. In addition to removing some of the dry skin flakes and cleansing away the lotion, vigorously rubbing with the alcohol pad for a few seconds (then letting it air dry) will abrade the skin slightly and further enhance the contact surface.

Oh, and make sure you're not putting the stickies on over the patient's nylon stockings! Take a minute to remove them before applying the electrodes! (Don't laugh. It happens more than you know!)

#### **6. Gorilla Syndrome**

The patient's skin also needs to be free of hair that interferes with electrode contact. This doesn't mean you need to shave every man you do a 12-lead on. If the patient's chest is hairy, you may still be able to get away without shaving it (and the patient will be grateful a week or so from now!). Unless there is an excessive amount of hair, or it's very thick, long, or curly, you might be able to just part it with your fingers and get

the electrode to stick to the small area of now-exposed skin.

If all else fails, you will need to shave the hair. Make sure you have already established where the stickies need to go. And remember, your shaved area is like your signature – if you placed the electrodes incorrectly, all the world will know it because of the incorrectly-placed little bald spots you left behind!

#### **7. First Things First**

It's often helpful, particularly with a fidgety patient, to put the chest leads on first. If you put the limb leads on first and the patient moves his arms or crosses his legs while you're putting the chest leads on, you'll find yourself having to go back and reattach those electrodes he knocked off in the process.

#### **8. Look at the Patient, Not the Monitor!**

Don't forget the basics. As with single lead monitoring, if you see a flat line, but you patient is talking, you know the problem is the machine not the patient. If you get a flat line but you know your patient is not in asystole, check your equipment. Begin at the patient and check that you have attached a clip securely to each of the 10 electrodes you have placed on the patient (one on each of the four limbs and six across the chest). A clip that has inadvertently come off will usually be the cause of a lead not reading. If that doesn't solve the problem, then check your machine and make sure your lead pack wire is plugged securely into the machine. Then check that each lead wire is plugged securely into the lead pack. Then follow each lead to the patient and confirm that the clip is securely seated into the wire.

#### **9. Provide support**

The key to getting an artifact-free cardiogram is a movement-free patient. If the patient has to be using muscles to hold her head up, you will see artifact. Place the patient as close to flat as she can tolerate. Provide a pillow and have the patient rest her head on that pillow. You may need to reposition her in order to allow her head to rest comfortably. Some patients might need more than one pillow to fill the space. Similarly, make sure the patients don't have to be using their own muscle strength to hold their arms up. If the person is especially thin, she might be able to rest her arms comfortably beside her body on the stretcher, but most of our patients spill over the stretcher sides. You might ask the patient to sit on her hands in order to keep them on the stretcher without having her have to use her muscle strength to keep them up. If that doesn't work, you may need to do some creative strapping to include the arms so the patient's muscles don't have to do any work.

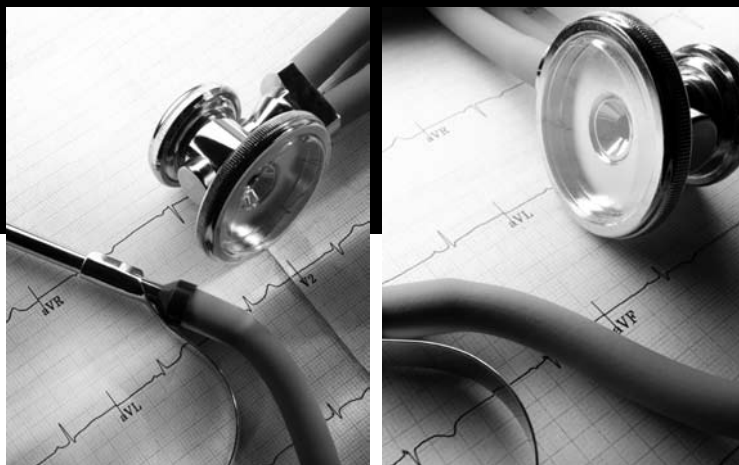
#### **10. Sit! Stay!**

Ever notice how often elderly people are holding onto a tissue or handkerchief? Ever notice how usually they are fidgeting with that tissue or handkerchief? Artifact! Ask the patient if you can hold the tissue

momentarily (or have the patient put it on his chest) during the EKG acquisition. You will be amazed at how many times that simple change will take you from an artifact-filled tracing to a clear one.

Many times when you instruct the patient to lie as still as he can, you still get artifact. A quick look at the patient finds him with clenched fists and pointed toes, in his attempt to lie as still as he can, just as you requested. Instructing him again to relax his muscles often falls on deaf ears, as he thinks he already is relaxing! Try reaching down and gently shaking his arms just a tiny bit, then doing the same with his legs; this will often help him release the tension long enough that you'll be able to get a better tracing.

Don't forget electromagnetic interference, either. If you find that your patient appears to be lying still and relaxed, yet you still see artifact (especially 60-cycle interference), consider the possibility that the problem is the electrical equipment around you, including the lighting, your portable radio, a cell phone, an automatic blood pressure machine, or even the wires from the EKG machine itself. Try turning off and/or unplugging non-essential equipment, uncrossing or repositioning leads going to the patient, or, if necessary, moving the patient to another location to do the cardiogram.



## 11. Whose Cardiogram Is It, Anyway?

If you want your cardiogram to be accepted by the emergency department staff and placed into your patient's chart, you must put some patient identification on it. Whether your machine allows you to enter the name or whether you write it on the EKG by hand, be sure that you identify it as your patient's. You should document his name, date of birth and/or MEMS state run sheet number, and the date and time of the tracing. Don't just leave it unlabeled at the patient's bedside when you drop the patient off, because that will quite likely cause it to end up in the wastebasket later on because nobody can be certain which patient it belongs to. It's also a good idea, if you have time, to mount it onto an 8-1/2 by 11 sheet of paper so that it won't fall out of the record at some point because it's a different size from everything else.

## 12. Explain What You're Doing While You're Doing It

Just because doing 12-leads has become old hat to you, it may not be such a routine matter for the patient. A lot of patients might not be expecting to have one done outside a hospital or doctor's office. Take the time to talk to the patient while you are applying the leads. "Have you ever had an electrocardiogram/EKG/12-lead done?" "It takes a picture of the electrical activity going on in your chest, but it doesn't put any electricity into you." "I'm going to put 10 stickies on you, one on each of your arms and legs and six across your chest." "The most important thing you can do to help make this test come out accurate is to lie as still as possible." For you, who have seen dozens of these done, there is not mystery, but your patient will most likely appreciate the explanation.

## Summary

Your prehospital EKG is the earliest cardiogram that the physician has on the patient. It may be the only EKG obtained while the patient has pain, because while you did the 12-lead you provided oxygen, put the patient at rest, and maybe gave nitro and morphine or fentanyl, and the patient might be arriving at the hospital pain-free. Make sure that this earliest cardiogram is the best quality it can be!

*Jacky Vaniotis is a Registered Nurse with 20 years experience in Emergency Medicine. She has 18 years EMS experience and is also a Maine EMS I/C. Jacky can be reached by e-mail at [JackyV@Vaniotis.com](mailto:JackyV@Vaniotis.com). Visit her web site, [www.vaniotis.com/jacky](http://www.vaniotis.com/jacky), for national EMS, Maine EMS, I/C, and medical/nursing news and links.*

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# CEH Corner

Once you have read the article "Twelve Tips for 12 Leads", you can complete the following set of questions and receive one hour of MEMS approved CEH credit – 0.5 hr. Cat. 2 (BLS Topics) and 0.5 hr. Cat. 4 (ALS Topics). Submit your answers by mail or electronically to: MEMS Journal, Kelly Roderick, 141 Fairfield Street, Oakland, ME 04963 or kr8264@gmail.com. Your completed questions must be received no later than August 8, 2008 to receive your CEH credit.

NAME \_\_\_\_\_

EMS or EMD License Number \_\_\_\_\_

1. Of the following, which are chest leads?

- a. I, II, and III
- b. II, III, and aVL
- c. aVL, aVR, and aVF
- d. V1, V2, and V3

2. Lead V4 should be placed at the \_\_\_\_\_ intercostal space.

3. True or False: Lead V4, V5, and V6 should be placed so that they circle around under the breast.

4. The V leads need to be placed in which order?

- a. V1, V2, V3, V4, V5, V6
- b. V1, V3, V5, then V2, V4, and V6
- c. V1, V2, V4, then V3, V6, then V5
- d. V1 then V4, V2 then V3, V6 then V5

5. Contact between the electrodes and the patient's skin can be enhanced by:

- a. cleansing the skin with alcohol
- b. applying moisturizer lotion to dry skin first
- c. placing the electrodes over nylon hosiery
- d. asking the patient to hold the electrodes in place

6. Shaving chest hair:

- a. is never appropriate
- b. should be done whenever necessary
- c. requires OLMC approval
- d. should be done for all male patients

7. Artifact can be caused by:

- a. patient movement
- b. loose wires
- c. 60-cycle interference
- d. all of the above





# EMS Educators: Can't We All Be Friends? The Ethical Dilemma

By Dan Batsie

Many years ago I was in a bar drinking with a group of fellow junior Marines. One of my fellow lance corporals spied a table of our more senior in rank squad leaders and walked over to say hello. After exchanging a couple rounds and the typical pleasantries, the junior man extended his hand and introduced himself informally as "John" and asked the now amiable corporal out of curiosity what his first name was. The Corporal replied with a quick change of tone, "My first name is Corporal."

Was this Marine noncommissioned officer being unnecessarily difficult? Was he unwilling to be friendly to a fellow Marine? No; he simply understood that the next day he would need to lead, correct and potentially discipline that junior Marine and the informal relationship the younger man was pushing would make all those tasks more difficult.

As a young leader I observed an important lesson that evening and as EMS educators we all could stand to learn a thing or two from this evolution of military leadership.

In our small EMS community everyone knows everyone and unlike many other learning environments, our instructors are often put in difficult positions. Students routinely are drawn from the same services and instructors often are familiar, if not friendly with the students they are tasked with teaching. Now this scenario is not all bad. A friendly, welcoming learning environment is clearly conducive to the success of the adult learner. However, often there is a blurry line between a welcoming atmosphere and the perception of impropriety.

Good EMS instructors dance along this line carefully. They present a casual atmosphere that creates a nonthreatening feeling for students and a situation where learners feel comfortable asking questions and reaching out for help. But where that positive atmosphere ends and "too-friendly relationship" begins often is difficult to perceive.

"Hey Dan, a bunch of us are going out to Applebee's after class. Why don't you come along?" "Hmm," I think to myself,

"I like drinking beer and I've even known some of the students for years prior to teaching this class; what could possibly go wrong with a quick drink with the gang?"

The answer--A great deal could go wrong.

Maybe I'm the most ethical instructor in the entire world. I wouldn't dream of treating anyone unfairly. And maybe I'm the most non-discriminating person around but even so, sometimes reality doesn't matter.

What if it just so happened that on the next exam, by chance, everyone that was out with you that evening earned an "A", but the three or four students who couldn't make it out earned a "B." Maybe you've done nothing unethical, but the perception of those receiving the lower grade is a different viewpoint altogether. "Maybe the only way to get an 'A' is to drink beer with the instructor." "I guess because I'm a single parent and can't go out; I'm doomed to a lower grade." "Maybe Dan is biased against single parents..." and downhill it goes. Is this a bit of a stretch? Of course, but it is an example of the slippery slope instructors place themselves on every day.

Consider the potential problems. Not to mention the scenario above, consider the influence of a casual environment with the potential "social lubrication" of alcohol. Maybe a student makes an insensitive remark. Maybe you laugh. Maybe another student who was just offended sees you laugh and again, we are off to the proverbial races. And by the way, the previous examples are relatively mild compared to other potentially more dramatic situations.

Now this doesn't mean that we can't be friends with the students. Again the positive, comfortable atmosphere is essential to a successful classroom. What it does mean, however, is that we can't date our students and furthermore it means that as instructors we must be conscious of that "blurry line" and perhaps enforce upon ourselves a higher standard than walk-a-day life.

Many institutions have fraternization policies but in our relative adolescence as a profession, we are still growing and often lack such formalities. In a situation where no formal policy exists, instructors must use good judgment in defining appropriate behavior.

Dick Cherry, in his educator's text, *EMT Teaching: A Common Sense Approach*,

continued on next page

# The EMD Corner

Drexell White, EMT-P  
Maine EMS EMD Coordinator

Since the last installment of The EMD Corner, I've started conducting site visits to the licensed Emergency Medical Dispatch (EMD) Centers in Maine. There are 39 such centers; 26 of them are Public Safety Answering Points (PSAPs) and 13 are local dispatch centers. Maine's PSAPs receive 9-1-1 calls from the public and either provide EMD directly or transfer calls to the non-PSAP EMD centers. The training and licensing requirements for EMD Centers and Emergency Medical Dispatchers are the same, regardless of whether a dispatch center is a PSAP or non-PSAP.

EMD Centers come in all shapes and sizes, from small, one or two position centers located in the basements or backrooms of local or county government buildings, to newly built facilities with many positions and all the bells and whistles. Regardless of the character or location of an EMD Center, the mission remains the same – providing professional emergency medical dispatching services at the local, regional or state level.

During site visits, I learn about the unique aspects of each Center and have an opportunity to meet with the center directors and dispatchers to discuss training, quality assurance and pretty much anything else that has to do with emergency medical dispatching. Training

issues and EMD renewal licensing requirements are most often the topics of conversation.

On the subject of training and EMD license renewal and at the risk of sounding like a broken record, I'll once again step up on my soapbox and shout to any EMD within earshot "Make sure you have enough continuing education to renew your license!"

For many EMDs, January 31, 2009 is the expiration date of their EMD license and, although it seems a long ways away, for many, license renewals will come due in seven short months. EMD Center directors and supervisors do a great job in keeping track of their staffs' training needs, but it's important to remember that an EMD license is issued to the individual. Obtaining the continuing education and completing the license renewal process is the individual EMD's responsibility. Work with your supervisor to ensure that when the time comes, the relicensing process will be smooth sailing. That's about it for now. Enjoy the summer.



## The Ethical Dilemma

continued from previous page

writes that EMS educators should look upon themselves as a "Senior Colleague." That is, someone who is indeed a fellow provider, but at the same time elevated to a position of authority in the classroom. Students should look upon an instructor as friendly and accessible, but also respect his or her position and the requirements thereof. The distinction between student and instructor should be made clear. Although you may enjoy the company of your students, if being friendly impedes your ability to foster success and equal treatment in the classroom, it must be considered a secondary concern.

Instructors should constantly be on guard against not only unethical behavior, but the perception of impropriety. While it is impossible to avoid the latter altogether, we must understand that certain behaviors put us in a more vulnerable position. While ethical dilemmas are often difficult to anticipate and even more difficult to navigate, in a position of authority setting the appropriate tone and defining a "collegial separation" are strategies that help us create a sound ethical foundation to build upon.

Ayn Rand said, "Ethics are a code of values which guide our choices and actions and determine the purpose and course of our lives." No matter what your personal source of your ethics, you must understand

that as an EMS instructor the decisions you make have a far reaching impact. Aside from procedural and legal implications, as teachers, we must set ourselves as models of excellence for our students to imitate.

As EMS grows and seeks the respect and status other health care professions have achieved, our providers must be well prepared to make good and ethical decisions. Their ability to do so begins with the example we as instructors set in our classrooms. The affective domain of our curriculum needs to be more than just checkboxes, but include principles and behaviors that we foster and model in the classroom every day.

Although it might be fun to unwind with the gang, as a teacher and a leader we must ask ourselves if the short term satisfaction of a cold frosty beverage outweighs the long term gain of protecting yourself from liability and constructing an ethical framework for your students.

Policy may guide you but more than likely in the end it will be up to your good judgment to make the right decision. Can we learn an important lesson from that Marine corporal in a bar many years ago? I think we can.

## *From the I/C News editor...*

Greetings all!

What does "continuing education" mean to you? Does it mean another class that starts with "the heart has four chambers, the top two are called the atria..." or "the first thing we always want to assess is the ABC's?" Does it mean merely revisiting the same topics in the same depth as those found in licensure courses? Or does it mean "expanding education," taking concepts presented in initial licensure programs and going beyond them?

To me "continuing education" should be "expanding education," exposing our students to ever increasing breadth and depth of material. Our initial licensure courses are only an introduction and should be enhanced with ongoing education that goes above and beyond licensure materials. Not only do the students benefit from an ever increasing knowledge base, but so do the teachers who get to prepare unique and interesting courses, and, most importantly, so do the patients who are being cared for by people who are constantly challenging themselves and making themselves better patient care providers.

So the next time you think about presenting another training on medical emergencies, consider spicing it up a little by introducing endocrine emergencies; when you're teaching OB and GYN emergencies, consider throwing in a review of cancers of some of the reproductive organs; when it's time to do pediatric emergencies, open yourselves up to starting a discussion of what communicable diseases children are prone to and which ones can be prevented with vaccinations. You can even spice up a trauma training by looking at some of the musculoskeletal disorders that affect people's gait, balance, and ability to ambulate. There's so much to learn in medicine, there's no need to waste time just reviewing the same limited (by scope and/or depth) topics over and over again.

\*\*\*\*\*

In this issue of the I/C News we welcome two new regular contributors. Jan Brinkman is Maine's Education and Training Coordinator, and will keep us updated on state and national education matters. Mike Azevedo, Chief at Carmel Fire and Rescue, is introducing the first installment in his column directed at training officers and others who teach continuing education classes. We welcome both of these contributors, and wish to invite anybody else who has ideas to join the I/C News writing team.

## *NREMT News*

In the spring 2008 of The Registry, the National Registry of Emergency Medical Technicians announced that, effective January 1, 2013, only paramedic applicants who have graduated from nationally accredited paramedic programs will be considered for registration. They explain that this is a move in support of the EMS Education Agenda for the Future and the Institute of Medicine's report entitled "EMS at the Crossroads," and enhances EMS as a profession.

The same issue of The Registry contains information about how EMS professionals can participate in Registry exam Item Writing Committees. They require that participants be licensed at and have a good understanding of national core content at (or higher than) the level for which they will be writing; they must also have a good command of current CPR and Emergency Cardiovascular Care guidelines ("in accordance with the International Liaison Committee on Resuscitation 2005 Consensus").

Interested parties should send a letter of interest indicating the level of testing they wish to write for and a copy of their résumé or curriculum vitae to Gabe Romero at the NREMT.



## *EMS Agenda for the Future*

The third draft of the National EMS Education Standards document for all four levels of EMS personnel (Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic) is available for review and comment at the NEMSES web site, [www.nemses.org/draftstandards.html](http://www.nemses.org/draftstandards.html). Comments will be accepted through the end of May, 2008, and the project team expects the final draft to be delivered to it in August or September. If you haven't already looked at one of the previous drafts, you might find it interesting to see what scope of practice is being planned for each level of EMS personnel.

The instructor guidelines are not ready to be released yet, but are expected to be available for review and comment this summer.

There is also, on that same site, an interesting historical timeline documenting EMS and EMS education from the 1950s to the present.



## Regional News

### MCEMS

MCEMS recently opened an online bookstore to sell their left over EMS textbooks and other EMS books. Becky Flanders, the creator of the bookstore, explains how the online store came into being. She said that the region needs to purchase books for courses before knowing exactly how many books they will sell. As a result, they often end up with many left over books, and very often before they are able to sell the overage, the publishers have come out with a new edition of the books. Because publishers have a time limit on returning books and require a restocking fee, the region was ending up with closets full of outdated materials. Flanders, who herself used to run her own online bookstore, offered to set up a storefront for the old EMS books. She says the store has been quite successful thus far, and that she has sold books to people all the way from Maine to California and most states in between.

Flanders sees this as a great opportunity for all involved. The region, while selling the books for less than original price, is still able to recoup some of its costs. Students anywhere in the country are able to purchase books at "sale" prices. And new but unused books aren't ending up in the landfill.

To see the bookstore yourself, go to the MCEMS web site, [www.midcoastems.org](http://www.midcoastems.org), and click on the green "Bookstore" link toward the bottom of the left-hand side of the page. And Becky says she would be happy to help any other region to set up a bookstore through [half.com](http://half.com).

### NEEMS

*Sally Taylor: NEEMS's Community Training Coordinator*  
*Dora McCarthy; Region 4 Administrative Assistant*

Sally Taylor was hired part time as Community Training Coordinator at Northeast EMS in August 2007, filling the position Rick Miller had held. She is in charge of the Training Center for American Heart and ASHI and oversees all of our CPR instructors. She has been a driving force to bring even more specialty training to Region 4. She is the coordinator for Region 4's Traveling CEH program. Sally has been and will be traveling all over Region 4 to roll out the new protocols.

Sally Taylor became an I/C in 2004 and a paramedic in 2005. She currently works at Capital Ambulance and Machias Ambulance. She has been teaching BLS Refreshers, CEH courses, and Basic and Intermediate courses for Northeast EMS for several years.

Taylor is also on the Exam Committee and EMS-C Committee at Maine EMS. She has plans to bring Child and Babysitting Safety and Disaster Management in Schools to our communities.

Sally's vision for Region 4 is to continue our high standard of educational opportunities and to bring them to the outlying parts of our region. She wants everyone in our 81 services and 11 hospitals to have a chance at the same quality education that we offer here in Bangor.

Theresa Cousins: NEEMS's Education Committee Chairman  
 Dora McCarthy; Region 4 Administrative Assistant

Theresa Cousins was voted as Region 4's Education Committee chairman in December 2007. Cousins, a paramedic at County Ambulance and Peninsula Ambulance, has been an I/C in Region 4 for six years. She is looking to the future to become a wilderness EMT instructor. Theresa lived for many years on the island of Isle au Haut and is very interested in being involved with the new island EMS protocols that are being discussed.

## Teaching Tips

When your students tell you that they know their skills according to their skill sheets, whether state exam sheets or skill sheets that you have created for your class, it's time to see how comfortable they really are. Have them write, in order, all the steps of a particular procedure or skill. Then have them compare against the actual skill sheet to see if they did, indeed, include everything required, and if they had it all in order. Many times this exercise serves as a wake-up call to those students whose confidence is higher than their actual knowledge level. While it may smack a little too much of "teaching to the test" for some of you, it does have the benefit of making the students really pay attention to how much or how little they remember of what's on the skill sheet.





## Committee Briefs

### Education Committee

*Jan Brinkman, RN, EMT-P; MEMS Education & Training Coordinator*

One of the Education Committee's biggest projects over the last several months has been its work on the new protocols. The 2008 protocol books are being distributed and, as you know, protocol update training classes have begun. The benefit of the update class is to give providers a Reader's Digest condensed version of the major changes in the new protocols, to answer questions and to lessen any possible confusion with the changes.

Some of the changes are new medications, like albuterol and ipratropium (combined as Duo-Neb or Combivent), and ondansetron (Zofran). Some of the changes are new skills and equipment, like the hemostatic agent QuickClot for hemorrhage control.

EMT-Basics who complete a MEMS-approved training program on the use of glucometers to check blood glucose levels and EMT-Intermediate/CC/Paramedic personnel who complete training on CPAP will be able to utilize the new protocols on these procedures effective on July 1. Both the glucometer information and CPAP training information is on the MEMS website, and you may contact your regional EMS office to check on training dates for these classes.

There is an old quote from Alexander Pope that says, "To err is human; to forgive, divine." Now some of you may ask why I stuck this quote in here; others already know. As you start reviewing the new protocols you may notice a typo or two that did not get picked up in the final editing process. Many of these will most likely be brought to your attention during the update training classes so as to lessen any confusion. For your convenience, we have made a list of protocol errata and frequently asked questions (FAQ's), and this is available for your viewing pleasure on the MEMS website.

Another large project for this Committee has been work on what we call the "Training Standards Manual." This guide for course approval is meant to assure consistent delivery, approval, monitoring, and evaluation of educational programs that will lead to EMS licensure in Maine. As more pressure is put on allied health professions to earn accreditation (which basically indicates that a program or profession meets certain minimum standards), we must make sure that Maine EMS stays on top of the current trends and does not have to play catch-up with the rest of the nation later. To this end, the Education Committee, working together with the Regional Offices and the Board of Maine EMS, will continue to focus its energy on moving forward with this document.

As with all projects, it is always helpful to have insight from new eyes and ears. We welcome your attendance at our meetings (held

the second Wednesday of each month at 9:30 a.m. at the MEMS offices in Augusta). If you cannot make a meeting, but would like to comment on our projects, please feel free to contact Dan Batsie, Education Committee chairman (dbatsie@emcc.edu) or me (jan.brinkman@maine.gov).

### Exam Committee

*By Jacky Vaniotis, RN, NREMT-P, Chair, MEMS Exam Committee*

At its March meeting the Exam Committee evaluated the Integrated Practical Exam (IPE) process based on results of exams thus far and also on responses from the survey that had previously been sent to Instructor/Coordinators, Program Sponsors, Regional Coordinators and State IPE Evaluators. The Committee discussed the IPE process and looked at whether it would be appropriate (in light of the 2007 statutory change that allows the MEMS Board to consider alternate forms of practical evaluation other than the "six-station end test" model currently in use) to recommend to the Board an alternative for practical testing at the EMT-Basic and First Responder license levels. After much discussion the Committee recommended continuing use of the IPE as the Maine EMS practical evaluation at these levels.

Further, the Committee recommended to the Board an adjustment to the scoring of the IPE. The original scoring system required a person to score 80% overall in order to successfully complete the IPE. Students received points for each completed task and three point deductions for each missed "Critical Skill" as listed on the individual skill sheets. At the completion of the station, points achieved were added up and points from missed critical skills were deducted in order to arrive at a score for the station. If the number of points deducted was greater than the number of points awarded, the exam candidate was given a "zero" for the station. Under that system, no candidate could have received a negative score. The concern was that candidates could get a zero on a station but still pass the exam overall.

The Committee calculated that, by eliminating "zero" as the limit for the lowest possible score and thus allowing for negative totals, we could significantly decrease the likelihood of a person scoring a zero on an individual station and still passing the IPE. The Board approved both continuation of the IPE and the recommended change in scoring, effective with all IPEs conducted on or after August 1, 2008.

Please feel free to attend any meeting of the Exam Committee, which now meets on the fourth Tuesday of each month at 9:30 a.m. As always, we recommend that you contact the MEMS office to make sure a meeting has not been canceled or rescheduled.

## Mike's Training Moments

### Learning Styles

*By Michael James Azevedo, Jr. EMT B; Chief, Carmel Fire & Rescue*

Greetings fellow EMS providers in the Great State of Maine. I hope you are enjoying the great weather now that the snow has gone and the flooding has gone down. I am just hanging up the 911 phone from a woman whose husband was chasing her with an axe. As police are responding, I am thinking to myself, "how would I treat that?" Better yet, "how would I get the new EMTs in my squad to be comfortable with this amount of trauma?" Thanks to the rapid response of the police, there will be no blood loss tonight. But this is how many of my training ideas get started.

I have the following expectations from this column. As a squad training officer for many years in different departments, I know how challenging training can be. Over the years I have picked up many ideas and put them to use. Some have worked well, and others not so well. The first point I would like to make is that very few of these are my own ideas. They have come from many of you, and been tweaked a little to work in my service. As the number of EMTs decrease in certain areas and the demands and expectations increase, we need to find a creative way to make training more fun, realistic and affordable. I would like to offer your ideas to other training officers, to assist them with the monthly department trainings they offer.

*"Train like You Fight, Fight like You Train!"*

As a kinesthetic learner, I need to put my hands on something, see it, touch it, take it apart, use it six times, and then maybe, just maybe I will be able to use it. Following the above quote (I heard this from L'Easa at Capital/Brewer), and my learning style, I need to have equipment that I can practice with. And hence my first tip: if you are a Maine licensed ambulance or rescue service, then you already have your training items. Check the required EMS equipment list found on the State of Maine EMS website and you will see that you already have the training equipment you need. Train with the same equipment you will use on calls and you and the patient will both come out ahead.

There are great benefits to using the equipment from your truck, rather than buying training equipment:

1. You guarantee that your members will be familiar with the equipment they will be using in the field.
2. You are able to make sure that the equipment will function properly. If it does not work in training, it will not work in the field. This is a good opportunity to make sure all the pieces are in the bag. (I have opened more KED devices to find the head piece and chin straps missing.)
3. You can make sure the equipment was properly cleaned and maintained the last time it was used. Have you ever pulled something you needed off the truck only to find it contaminated? Yuck.
4. You can make sure your crew knows how and where to put the equipment back into service.
5. It is cheaper as you already have it.
6. When the cabinet is empty is a good chance to clean and disinfect the cabinet. Now that mud season is over, spring cleaning can begin.

I know what you are thinking. What if we get all the equipment off the truck and we get a call? Right, admit it, you were thinking it. First, if you have multiple trucks, or a good mutual aid partner, this is not really a problem. Second, you can usually put stuff back on the truck in a hurry. I generally use only certain equipment at a time for this very reason. My service responds 240 times a year, and generally only about six times a year during training time.

Training exercises need to be practical, realistic and interesting. Please remember that most of your people are not EMTs full time, have children and spouses at home, have full time jobs, church, scouts, baseball and many other activities that take up their time. Please remember that their time is very important, and so is yours.

If you have a practical scenario or training idea that I can borrow or steal and give out to other training officers via this column, please e-mail it to me. Your homework assignment for this quarter is to take one piece of equipment that you are not familiar with, learn all you can about it, and then tell me about it. That way we will both know. Is that not what training is all about?

Until next time, thank you for the people you train and the lives that are saved as a result.

## Last Words

Please submit any materials you would like to have published in the next issue of the I/C News by August 1, for publication in the October edition of the Journal of Maine EMS. Submit material to: Jacky Vaniotis, 172 Haskell Road, North Yarmouth, ME 04097, or email [JackyV@Vaniotis.com](mailto:JackyV@Vaniotis.com)



# Maine Emergency Nurses Association

Tammy Lachance, RN, BSN, CEN  
Central Maine Medical Center

## Karen O'Neill Professional Award

Congratulations to Wendy Nivison, RN, BSN, CEN, recipient of the 2008 Karen O'Neill Professional Award. The Karen O'Neil Award is given annually in tribute and memory of one of Massachusetts' finest emergency nurses who died at a young age, but with many accomplishments. The recipient is selected by New England ENA presidents at the Leadership Challenge each year based upon the following criteria:

- Current membership in ENA.
- Outstanding knowledge and expertise in emergency nursing practice, education and professionalism.
- Contributions that have affected the profession within the community, region or county.
- Influencing emergency nursing in a professional role within the New England States.
- Serving as a role model for Emergency Nurses.

The award is presented at the New England Regional Symposium (NERS), which rotates annually from state to state.

Wendy Nivison, RN, BSN, CEN, this year's recipient, was presented the award at NERS in Mystic, Connecticut during the last week of April 2008. Wendy demonstrates all of the qualities listed above and is an invaluable member of Maine ENA. She has held nearly every leadership role within Maine ENA, has participated in ENA at the national level and has demonstrated service to her community in numerous ways, including being an advocate for child passenger safety. Wendy lives in Winslow and works at MaineGeneral Medical Center's Waterville Campus. She is truly deserving of this award. Congrats, Wendy!



*Karen O'Neil Professional Award Recipient Wendy Nivison, RN, BSN (right) with Mary Davis, RN, Connecticut ENA President (left) at NERS 2008*

## Spring Meeting and Education Day

The Maine ENA Spring Meeting & Education Day was held on May 5, 2008 at MaineGeneral Medical Center, Waterville Campus. The theme was "Because You Asked For It", with topics that were specifically requested by the membership, such as patient safety and quality, recognition and treatment of shock, and obstetrical emergencies. Thank you to the speakers and to everyone who was involved in the planning. You all made this day a great success!

## Congratulations to Geneva Sides, RN, BSN

Geneva Sides, RN, BSN was recently appointed by Governor Baldacci as the Nurse Representative to the Board of Maine EMS. She is a long-standing member of Maine ENA, the current chairperson for TNCC, and a member of the State Trauma Advisory Committee. Geneva works as the Staff Development Coordinator at Seabrook Valley Hospital in Pittsfield and previously worked as the ED Nurse Manager at Redington-Fairview General Hospital in Skowhegan. Geneva will be a great addition to the EMS Board. Congrats and thank you for volunteering to fill this important role!

## Upcoming Meetings

### The Maine ENA Annual Meeting and Education Day September 12, 2008

Hilton Garden Inn, Auburn, ME

Please join us for great educational topics, networking with other emergency nurses, delicious food, awards and raffle prizes. Watch for the brochure in the mail or go to [www.enaine.org](http://www.enaine.org) for more details.

### Maine ENA Board Meetings

All Maine ENA members are welcome to attend. Contact a Board Member for more details. Meetings are typically from 9am to 12noon.

- June 27, 2008 in Harpswell at the Blackbird Café
- October 3, 2008 at MaineGeneral Medical Center in Waterville
- December 12, 2008 at Darlene Glover's Home

### Save the Date

### Annual Conference: Pathways to Discovery September 25 – 27, 2008

Minneapolis Convention Center

For more details, go to [www.ena.org](http://www.ena.org). Online registration is available.

### ENA-Sponsored Courses

2008 Emergency Nurses Pediatric Courses "ENPC", are being offered at several locations in Maine. Check the Maine ENA web site at [www.enaine.org](http://www.enaine.org) or contact Carmen Hetherington, RN, BSN, CEN, Pediatric Committee Chairperson, at [carmen@suscom-maine.net](mailto:carmen@suscom-maine.net)

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## New Faces and Going Places

Anyone in health care with experience in training hospitals has always advised families to do whatever they can to stay out of hospitals every July, as that is the month every year that a whole new crop of physicians in training either begin or move up in rank and responsibility. July is quickly approaching, and what this means for Maine's EMS folks is 8 new ED residents in the trauma rooms of Maine Medical Center and on ride alongs, as well as long pauses and stumbling on the radio as the new third year ED residents get comfortable taking Med Control calls. The close of this academic year means that the current third year residents will be moving on, and all have accepted jobs in EDs all over the country.

To start, two graduates are planning on staying in Maine. You will still be seeing Rob Hulefeld around as he has accepted a job at Central Maine Medical Center, and Kate Good will be working at Southern Maine Medical Center. Liz Andrada, Tripp Carter, and Nick Armellino have all accepted jobs in New Hampshire, while Jess Wasielewski and Eric Lowe

have accepted jobs out west, in Boise, ID and Bozeman, MT respectively. Jen Boyle has accepted a two-year fellowship in toxicology at University of Virginia.

And for the new faces? We were excited to welcome in eight great new residents to the program from all over the country. Justin Bennett, coming to us from Dartmouth Medical School is the only true Mainer of the bunch, born and raised in Waterville. Luke Wood will be staying in Maine for residency, having just graduated from University of New England in Biddeford. Anthony Foianini and Jack Gervais are both moving to Maine with their wives from out west, having just graduated from University of Colorado. Matthew DeLaney and his wife, who is starting in the Family Practice residency are joining us after graduating from University of South Alabama. Jeffrey Schoengold also couples matched, his wife is starting in the OB/GYN residency, both coming from Georgetown University in Washington, DC. James Gallea is venturing the farthest, he and his boat are moving from Seattle where he just graduated from University of Washington School of Medicine. Michelle Crispo, who graduated from University of Vermont, is the only woman of this talented group. Like most ED physicians, they are all very active, most are accomplished cyclists, runners, skiers, etc. There is even an Iditarod musher in the group.

For the rest of the ED residents, we are all excited for another great year and look forward to our interactions with EMS, whether it be in the ED or on a bike!

## Maine Emergency Nurses Association

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### Trauma Nursing Core Course "TNCC"

2008 Courses are being offered at several locations in Maine. Check the Maine ENA web site at [www.enamaine.org](http://www.enamaine.org) or contact Geneva Sides, RN, BSN, Trauma Committee Chairperson, at [sidesboss@hotmail.com](mailto:sidesboss@hotmail.com)

Instructor courses will also be held in 2008 for both ENPC and TNCC. Check out the [www.enamaine.org](http://www.enamaine.org) web site for dates and locations. Participation restrictions do apply.

### Injury Prevention: "EN CARE"

EN CARE is the injury prevention institute of the Emergency Nurses Association. The goal is to reduce the number of preventable injuries in the young, the adult, and the mature adult communities through public education, professional training courses and legislative advocacy. More than 5,000 emergency nurses, pre-hospital providers and law enforcement officers have been trained to teach EN CARE injury prevention programs, such as:

- Child Passenger Safety
- Bicycle and Helmet Safety
- Gun Safety – "It's NO Accident"

- Alcohol Prevention Education – "Choices for Living"
- Healthy Aging Education – "Stand Strong for Life"

One eight-hour day is all it takes to be recognized as an ENA Injury Prevention Provider. Anyone can take the EN CARE training course and there is no testing. If you are interested in taking this course, please contact Sarah Scott, RN at [sascott19@aol.com](mailto:sascott19@aol.com).

### Maine ENA Website

Check out the new and improved Maine ENA website at [www.enamaine.org](http://www.enamaine.org). It contains lots of info, including:

- Membership benefits
- Upcoming events
- "Maine Matters", the newsletter of Maine ENA
- CEN review questions
- Contact information for officers, board members and committee chairs

Have a fun and SAFE summer! Please wear a helmet when riding a motorcycle, bicycle or ATV and ride safely!



Greetings!

This issue, I would like to put on another of my hats (this one has earflaps) and recognize the 15th anniversary of the Maine Trauma System. As state EMS director, I enjoyed the opportunity to work with EMS system-building heroes like Dr. Larry Hopperstead in shaping the new trauma system in the early 1990's. I liked it so much, that I still help out Maine EMS as the part-time Trauma System manager. To recognize this important anniversary a few of us wrote op ed pieces for the major papers around

the state to appear during EMS Week. Dr. Hopperstead's article had to be trimmed to the newspaper's limit, but I felt that it captured the strength and spirit of the System so well that I wanted to reprint it here in its entirety.

Dr. Hopperstead has been an emergency physician and trauma surgeon in the TriCounty EMS Region, among many other roles, and currently serves as Chief Medical Officer of Central Maine Medical Center. His fingerprints are all over the architecture of the Maine EMS system.

## Maine Trauma System Celebrates Its 15th Anniversary

Larry O. Hopperstead, MD, FACS, CMO

In the early 1970's, in response to a growing concern with the uncontrolled and undisciplined way that accident victims were being managed and transported from the scene to nearby hospitals, the Federal Government launched an initiative to create the Emergency Medical System (EMS) nationwide. Specific EMS Regions were established within each state, for the purposes of controlling ambulance licensure, mandating crew training, providing educational opportunities, and supporting the development of treatment protocols as well as on-going quality improvement efforts. Six (6) such EMS Regions were established in Maine. Emergency Medical Technician (EMT) and Paramedic training programs were developed, the latter typically in community colleges, and large regional and smaller local ambulance services began to collaborate on the rapid and safer movement of the victims of accidents and acute illnesses from the scene to hospitals. The most significant feature of all these efforts was the putting into action the understanding that certain actions involved in the handling of patients (like the splinting of fractures and the stabilization of the spine) could prevent further injury during the transport to the hospital, and certain other actions in the management of the patient's condition (like the administration of oxygen with supportive breathing, provision of intravenous fluids, or defibrillation of an erratic heartbeat) could actually save lives prior to arrival at the hospital.

EMS proved remarkably successful, and by the 1990's a comprehensive network of ambulance services with trained EMT's and Paramedics was in place and functioning well. Despite all the efforts and relative successes, however, there was the growing awareness that care for the most seriously injured patients demanded something more. Multiple studies from various parts of the country, involving many good



hospitals, had shown that an alarming number of "un-necessary" or "preventable" trauma-related deaths were occurring in American hospitals that were not fully prepared or staffed to provide comprehensive trauma care. What these trauma patients needed, in order to maximize their potential to survive and to have functional recovery from their injuries, was to have rapid transport through the system to a hospital with the experience, and the around-the-clock availability of all the specialty services necessary, to fully manage these complex injuries. The concept of taking the patient to the nearest hospital was no longer enough. What was necessary was getting them to the nearest comprehensive Trauma Center in the shortest possible time, all the while providing in-transit stabilizing interventions that could support or save the patient's life. Sometimes, depending on the geography or other realities of the situation, a temporary stop at the nearest hospital for some resuscitative maneuver would be necessary, but the overall goal was arrival at the end-destination, a designated Trauma Center, as soon as possible and with appropriate stabilizing treatment while en-route.

In response to the above concerns, the Federal Government established a nationwide initiative to improve trauma care, which lead the State of Maine to enact into law in 1992 "An Act to Establish a Voluntary Trauma-reporting System". Kevin McGinnis, then Director of EMS for the state, was instrumental in effecting passage of this law, and worked along with key physician, nursing, EMT, hospital administration, and citizen leaders to bring the law into action. A key concept to its acceptance was the voluntary nature of the resulting effort. No mandates were imposed. The state allowed for the processes of natural, but guided, evolution to occur. As a result, from its very inception, the State of Maine's Trauma System has benefited from full and active participation of every one of its hospitals, large and small. Three strategically located hospitals were committed to, and could demonstrate the depth and breadth of specialty services and support to be designated as, Trauma Centers, namely Eastern Maine Medical Center, Central Maine Medical Center, and Maine Medical Center. The system was established and fully functional by 1994, and has become one of the most respected rural Trauma Systems in the world.



*Maine's EMS system has evolved into one of the best trained and coordinated systems of any state. Approximately 4000 EMT's and 900 Paramedics are distributed about the state, working for the more than 200 private and voluntary transporting ambulance services.*

Maine is a challenging environment for trauma system efforts. Its 1.3 million people are widespread, and its geography complex. Despite the low base population, Maine boasts a rather high number of individuals involved in dangerous occupations like forestry, fishing, and farming. Millions more flock to Maine every year for recreational purposes, many of which expose them to a relatively high potential of personal injury, often suffered in rather remote areas. The island-based population adds additional impediments to the transportation of the injured patient. Despite these challenges, our EMS system has evolved into one of the best trained and coordinated systems of any state. Approximately 4000 EMT's and 900 Paramedics are distributed about the state, working for the more than 200 private and voluntary transporting ambulance services. It is this group of EMT providers, working with their medical control physicians and operating under State EMS management protocols, that make most of the pre-hospital decisions of ultimate end-destination for each trauma patient, and that conduct the pre-hospital life-saving maneuvers that allow transport to the nearest hospital or Trauma Center to be as safe as it can possibly be. There are currently greater than 35,000 ambulance transfers yearly for problems related to "trauma". Of these, about 10% are the most seriously injured, typically with multi-system, potentially life-threatening injuries. These latter are managed at one of the three Trauma Centers (EMMC, CMMC, or MMC). In Calendar Year 2007, those three hospitals admitted and managed 3570 major trauma patients, a full 33% increase from the volume in 2004.

One of the greatest contributing factors to the rapid transfer and quality of care for critically injured trauma patients has been the addition of emergency air ambulance transfer, provided by LifeFlight of Maine. LifeFlight started operation in the fall of 1998, as a joint venture of two of the Trauma Centers (EMMC and CMMC). Like all other ambulances in the state, it is fully licensed by Maine EMS. It serves the entire state and all hospitals within the state. The addition of LifeFlight to the already superlative infrastructure of the State's EMS system enhanced and maximized the potential of that system to its current world class capabilities. The trained Critical Care Paramedics and Critical Care Nurses who man the LifeFlight air ambulances work with an expanded level of skills and protocols. They cooperate fully with the ground-based EMT's and Paramedics, who are most often the first responders at the scene of injury, for direct scene-to-Trauma Center emergent transfers. Equally important, they facilitate effective and timely inter-facility secondary transfers from the Emergency Departments of the Trauma System Hospitals,

where initial stabilization and/or resuscitation has occurred, to the Trauma Centers. The major incremental advantages that LifeFlight brings are the critical care skills of its crew and the decreased time in transit to the end destination Trauma Center. In trauma, the time to definitive intervention is crucial to the saving of lives. Not only does the patient arrive at the Trauma Center sooner, but typically, because of the interventions that are a part of the LifeFlight crew's capability, they arrive there in more stable condition than when the transfer started.

When all is said and done, the people of Maine can be justly proud of their state's Trauma System, developed over the past 15 years on the shoulders of a robust EMS system that dates back 30-plus years. The quality of our current Trauma System is widely respected, and has been built on the efforts of countless individuals and many institutions, all working together for the betterment of life and living in Maine.

## When your next call involves a hot line — call ours!



Roger Audette, Augusta Fire Department

Don Rowell, CMP Communication Center

Don't take any chances with electricity. If you are first on the scene of an accident involving power lines, **remember:**

- **Assume all electrical wires are live.** Don't touch them or anything that might be in contact with a live wire.
- **Secure the scene.** Keep bystanders and other personnel at a safe distance. A high voltage line on the ground can deliver a fatal shock up to several feet away.
- **Call our CMP hot line.** 24 hours a day, we're ready to dispatch crews to make it safe for you to do your work.

Keeping you safe is a priority for us. Your service is invaluable. We hope ours is, too.



Central Maine Power  
Your Electricity Delivery Company

# Total Quality Management from a New Perspective

William H. Dunwoody, MBA, CQIA, CMQ/OE, EMTP

Some providers, those that have been involved in EMS or business practices for 30 years or more, might remember the introduction of the concept called Total Quality Management (TQM). This principle, first introduced in the 1980's, is defined as, "A process for managing quality; it must be a continuous way of life; a philosophy of perpetual improvement in everything we do." (Hansen, 2005)

Right from the start, the idea of TQM was embraced by many organizations, both inside and outside the healthcare environment. Unfortunately, the concept failed to gain traction in many organizations for several reasons; a lack of support and follow-through at the executive and board levels and a lack of buy-in at the staff level; all due primarily to a lack of understanding at all levels. The understanding that was missing from this early implementation was the principle that quality is not a quick fix; it is a continuous process involving all areas and levels of an organization that requires a persistent focus on evaluating the processes and systems of the business.

Healthcare quality management practices have traditionally focused only on the clinical aspects of the organization's processes and rarely on practices related to financial, strategic, or operational functions. In recent years it has been shown that quality cannot be viewed and confined in silos, or functional areas. Quality is a synergistic concept; different areas of a business tend to interact—a high degree of clinical quality can only be achieved if there are high quality organizational support mechanisms in place. For example, clinical quality cannot be delivered if there is not an effective human resources recruitment, retention, and development system in place to maintain a workforce of qualified providers. Adequate operational and financial management practices must also be in place in any business if it is to maintain sufficient equipment, supplies, and facilities for the delivery of quality clinical care.

In recent years, critical thinkers in the healthcare quality industry have come to realize that the traditional definitions of quality in healthcare as defined by its practitioners are not sufficient; there needs to be more of a focus on quality as a systems engineering or process management approach. This change is apparent in the theme of the Quality Institute for Healthcare Conference held in Houston in early May. The theme for this gathering was, "Leading a partnership between systems engineering and care delivery professionals." (QIHC, 2008) The systems engineering approach evaluates the efficiency and value of the operations of an organization not just from a clinical perspective but by continually measuring all aspects of the organization's processes (financial, satisfaction, resource utilization, etc.), evaluating how each process interrelates with other processes within the organization, and developing systems designed to prevent error, deliver services in a timely manner, and maintain economic and operational efficiency. This concept is

supported by the works of the Institute for Health Improvement, the American Society for Quality, and the Society for Health Systems.

One viewpoint on TQM that has been presented at EMS conferences in Maine, most recently at the Mid-Coast EMS Seminar and the Western Mountains EMS Conference, as well as at national and international venues suggests that there are five areas of focus that make up the picture of total quality for any organization. These areas include the qualities related to the Reputation, Image, Service, Technical, and Operational aspects of the organization.

## Reputation Quality

Reputation quality is all about how the organization, or the industry, is perceived by its customers; those customers that are external to the organization and those that are internal. External customers include the public, patients, municipal and business administrators, physicians and nurses, prospective employees, and vendors; anyone outside of the company that interacts or has the potential to interact with the company. Internal customers are primarily made up of the employees and leadership of the organization.

The organization's reputation can be negatively or positively impacted by the actions or inactions of the organization's representatives. Events that can have a negative impact on the reputation of the business include: a) a failure to respond to complaints; b) a failure to acknowledge or consider suggestions for improvement; c) a perceived disregard for the health and welfare of the organization's clients based on the actions of the employees or leadership of the service; d) inconsistency or inequity in the administration of company policy; e) a failure of the organization's administration to establish an equitable market driven wage and benefit program; and, f) a disregard for or failure to comply with federal or state laws or regulations related to labor standards and wage administration, safety standards, or educational compliance standards, to name a few.

A negative organizational reputation can impact employee morale, the potential to recruit and retain qualified and dedicated employees, and the acquisition and retention of service contracts. Eventually, a poor organizational reputation can lead to a decline and ultimate failure of the business.

Organizations that exhibit positive characteristics contributing to a positive reputation do not rely on slogans to convince their external and internal customers of the quality of their services; quality is self evident in the actions and demeanor of the organizations' representatives. Businesses with a positive reputation become the employer of choice in the industry, look for opportunities to improve the organization through effective resource management (human, intellectual, and physical), and continually maintain compliance with all

regulatory, statutory, and accreditation or licensure standards; world class organizations view regulatory standards as opportunities for improvement instead of burdens to be surmounted or avoided. The leadership of a business with a positive reputation establishes a culture of accountability, integrity, and compassion through personal example and active engagement in the day-to-day functions of the organization. The leadership also encourages employee engagement in the organization and its mission by establishing a culture of empowerment and cooperation.

### Image Quality

While the reputation of an organization is more of a retrospective measure as it looks at past actions and impressions, image is more of a concurrent measure of organizational quality. Image relates to how the day-to-day presentation and actions of the organization's representatives flavor the customer's impression of quality as it pertains to not only the organization but its representatives as well.

All types of people operate in the EMS work environment. Individuals that present a positive image tend to be respectful, courteous, clean, and neat. They always dress in an appropriate, clean uniform, operate a clean and organized ambulance or other healthcare delivery environment, and always represent themselves, their organization, and their industry in a positive light. Customers are left with the impression that the delivery of service is an honor and privilege and that the individual providing this service is pleased to serve and anxious to please.



(Schultz, 1954)

Individuals that present a negative image are often described as slovenly, disrespectful, and uncooperative. Uniforms, if worn, are stained, dirty, and wrinkled. Hats often look like they contain enough oil to satisfy the maintenance needs of the entire fleet of ambulances. Interactions between these individuals and others in the company and community are often strained or confrontational. A concern for patient and personal safety is often absent. Providing service and interacting with customers, peers, and the public is viewed to be a burden that must be endured.



(Ward and Shaw, 1948)

While we tend to blame the individual when negative behavior or the presentation of a negative image occurs, a poor individual image speaks volumes about the culture and standards of the organization. Since it can be stated that the environment and culture of the organization as established by the leadership are reflected in the manner in which individuals present themselves, a poor image that is tolerated by the organization's leadership can be indicative of a declining or dysfunctional organizational culture and ineffective leadership while the opposite can be said of individuals that present a positive image.

Individuals that work in a positive work environment with effective leadership will often reflect not only a high degree of professionalism but also a high degree of satisfaction with the environment and culture of the organization. There are also those individuals that exhibit a positive image regardless of their environment of work; this is a reflection of high personal and professional standards and work ethic.

### Service Quality

Service quality is flavored by both the reputation of the organization or industry and the image of the individuals with whom the customer interacts. Customers that have a poor pre-existing impression of the organization's reputation or are presented with a less than ideal image of the service providers will often come out of the experience with a negative overall impression of the quality of service. Service quality is all about the interaction between a customer and a representative of the company.

Barring any preconceived reputation or image problems, the manner in which individuals are treated with respect to their basic needs will have a significant impact on the overall impression of service quality. The best way to begin a discussion on the components of service quality is to review the principles of Abraham Maslow as described in his Hierarchy of Needs, first introduced in 1943.

According to Maslow, each individual has the potential for aspiring to five basic needs: a) Physiological; b) Security; c) Social; d) Esteem; and, e) Self-Actualization. Maslow believed that before an individual can aspire to satisfying a higher need (security being higher than physiological) the low level need must be satisfied (Maslow, 1943).

So how do these needs translate into quality in the delivery of service to EMS customers? With a little creative thought each of these needs can be

with equated with actions by EMS providers that are designed to enhance or add value to the interactions that can occur between EMS providers and the customers that are cared for by these providers thus contributing to the customer's ability to aspire to a higher need.

Physiological needs relate to the basic needs required to maintain life; air, food, water, warmth, etc. One simple way to fulfill the customer's need at this level is to ensure they are appropriately warm (or cool). In the middle of winter, wrap the patient in a good blanket to ensure their warmth and don't forget to cover their head. Common sense, true, but how many times does a patient leave a home or hospital covered only with a flapping bath blanket in minus 40° temperatures?



(Maslow, 1943)

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# Total Quality Management

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Likewise, security needs can be addressed through careful patient handling, use of eight point restraints (including over the shoulder restraints) on all stretcher patients, as well as competent and careful driving practices.

Social needs can be fulfilled by ensuring the privacy of each patient while they are in the care of an EMS provider and maintaining the confidentiality of patient information during and after the customer-provider interaction.

Esteem needs are best fulfilled by treating each customer with the respect they deserve and expect; the same respect with which we would all hope our families are treated if they were in the same circumstances. This means referring to the customer by their chosen name (Mrs. Jones) instead of some generic term of familiarity (honey or dear) or their diagnosis (the fracture hip in room 4).

An opportunity for Self Actualization can be provided to the customer by respecting their right to make decisions regarding their own care. This can be as simple as asking the customer or patient permission to start an IV or allowing them to be comfortable in their decision to appropriately deny care or, in some situations, accept the death of a loved one.

## Technical Quality

In EMS, technical quality is all about the clinical aspects of care. While this is an important aspect of the total quality picture, in reality most customers, in most cases, have little capacity to determine the quality of the clinical services provided. Quality in the delivery of care is quite frequently viewed as a given. It is assumed by most patients that if an individual has been hired to do a job, then they have the skills and knowledge to do that job appropriately. This is where medical directors, clinical quality improvement managers, and peer review boards—the quality management team, come into play. The role of this team is to develop a prospective system of evidence based treatment criteria and processes that can be performed with minimal error, to ensure that knowledge of these criteria and processes are deployed to all providers, and that all providers have the background knowledge and skills to interpret and implement these criteria and processes. Once these prospective measures have been established, the role of the quality management team changes slightly to one of evaluating the performance of the system as compared to planned outcomes. If it is determined that the system is not performing up to expectation, this quality management team is then tasked with evaluating the system for process deficits to determine the means of changing the system so that the planned outcomes are achieved.

## Operational Quality

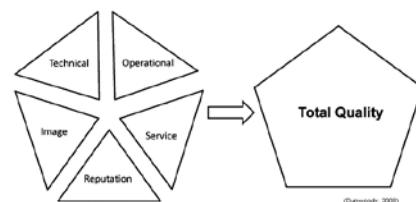
Operational quality concerns those factors that have significance to the organization's management and governance or customers involved with the organization in some type of managerial, regulatory, financial, or resource management role. These customers include local, state, and national regulatory agencies; municipal governments and taxpayers; agencies with which the organization enters into service contracts; and other stakeholders interested in the operational aspects of the organization.

This element focuses on the organization's capability to effectively and equitably manage its strategic, marketing, financial, human resources, information, and knowledge management functions. Effective and equitable operational processes include the creation of a strategic plan and written internal standards for financial compliance, recruitment and retention, affirmative action, and performance evaluation, to name a few.

Those organizations that do not take the time to develop operational standards and strategic plans or that develop operational standards and strategic plans but do not use these resources as "living documents" are prone to inefficiency and potential operational or financial failure. According to the Japanese proverb, "Vision without action is a daydream. Action without vision is a nightmare." (Anon)

## Total Quality

While it can be argued that other organizational factors are as important or more important than the five elements described, the critical lesson is that quality in any organization, be it a hospital, fire department, ambulance service, or factory is not just about the technical (clinical) aspects of the service or manufacturing process. Total quality encompasses all of the processes that make up the total organization. All functions within a business need to be present to support and compliment the ultimate organizational mission as defined by its stakeholders, leadership, governance, and customers.



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## Reflection on another kind of Cardiac Arrest

The chief surgical resident frowned over her face shield: "I can't find the aorta! I've done this lots of times in the OR and it should be right here." The ED attending concentrated on the gaping wound provided by the thoracotomy and pointed: "There, right there!" "I see it now" the resident said... "But it's empty! No wonder I couldn't find it." This discovery ended the resuscitation as the liters of blood and saline had produced no effect on the circulating intravascular volume...pouring out into the abdomen as quickly as it came in through the femoral line. We had hoped that one of the bullets might have punched a hole in the right ventricle that we could plug with a gloved finger, or perhaps have caused a quickly drained a pericardial tamponade. This was exsanguination, however, and at this point in the code all other efforts were futile. There were no pressors that could restore vascular tone to a collapsed aorta. There was no internal defibrillation that could revive an empty heart.

Unfortunately this spring, we have encountered several tragic deaths from gunshot and stab wounds. In Maine, since, thankfully, we do not commonly see such injuries, we do not think in terms of what type of resuscitative effort will make a difference in their outcome. Closed chest massage, epinephrine, and intravenous dopamine have no role here. Finding a reparable hole, relieving tension pneumothorax or pericardial tamponade, providing adequate blood products and doing it all within four minutes of the arrest are the patient's only hope. As emergency physicians we cannot rely on the presence of

a trauma surgeon within this time frame when the only notice may be the slamming door and screeching tires of the "drop off" car at the ED entrance. We must remain comfortable with the procedure of an emergency thoracotomy and our decision to perform it. Dr. George Higgins has provided the following Internet link as a review: [http://www.trauma.org/index.php/main/article/361/Emergency Medicine](http://www.trauma.org/index.php/main/article/361/Emergency%20Medicine) remains a unique combination of competence in both knowledge and emergency skills. It benefits both our stress levels and our patients' outcomes for us to keep on the "cutting edge" in both. Journal clubs and LLSA reviews are certainly worthwhile but periodic procedural updates similar to what Dr. Peter Goth has previously offered are also essential.

## Meeting of Note

Emergency Medicine Update: July 22-25 at Colby College in Waterville. Dr. Andy Perron will again host a number of excellent speakers on various topics relevant to providers working in an Emergency Department. This year's presentations will include: OB-GYN emergencies, challenging Infectious disease emergencies, the ABEM sponsored LLSA for 2007, and a number of "hot" topics in Emergency Medicine. This is a great opportunity to collect some valuable CME credit while enjoying the many opportunities for a great family vacation at Colby College.

## In Memoriam: Oden F. Cassidy

Lt. Col. Oden F. Cassidy, retired, passed away on May 3, 2008, after a lengthy illness. Col. Cassidy achieved two successful careers in his lifetime with 32 years in the U.S. Army Reserve Battery B Houlton and 30 years as a science teacher at Houlton High School. He was an integral part of the Greater Houlton community, with years of volunteer and civic activities, including Meals on Wheels and the State of Maine Board of EMS. He is survived by his wife of 48 years, Linda Russell Cassidy; four children, David and wife, Diane, of Cary, Karen of Alexandria, Va., Kathy of Old Town and Andrew and wife, Joy, of Glenburn; seven grand-children, LeeAnna, Greg, Lisa, Holly, Sarah, Brandon and Roman; one great-grandchild, Brennen; one brother, Morris and wife, Lois, of Houlton; two sisters, Linda Hannigan of Houlton and Bonnie Delcezio of Fort Fairfield; sister-in-law, Sue Cassidy of Houlton; several nieces and nephews. Friends who wish may make gifts in Oden's memory to Houlton-Hodgdon Dollars for Scholars, care of Dunn Funeral Home, 11 Park St., Houlton, ME 04730.



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# Maine EMS 21st Annual Awards Ceremony

May 20, 2008 | Maine State House | Hall of Flags

## Recognition of HeartSafe Communities

Award levels are based on a number of factors, including community education and availability of CPR and AEDs, pre-arrival emergency medical instructions provided by dispatchers, paramedic availability, and advanced cardiac monitoring capability.

### SILVER

Downeast EMS  
Madawaska Ambulance Service  
Patten Ambulance  
Van Buren Ambulance Service

### GOLD

Ambulance Service Inc.  
Bath Fire and Rescue Department  
Houlton Ambulance Service  
Island Falls Ambulance  
Sebasticook Valley Hospital Ambulance Service  
Westbrook Fire and Rescue

## GOVERNOR'S AWARDS

### Paul Liebow, MD, Bucksport

Dr. Liebow is an enthusiastic and unwavering champion and ambassador for EMS. For three decades he has been actively involved with Northeast EMS and served as the regional medical director, EMS instructor, and compassionate friend. Although he spent many years as an attending physician at Eastern Maine Medical Center, those who know him will be quick to mention his support and personal understanding of what it is like to provide care in rural areas. Dr. Liebow was an early spokesperson for the importance of AEDs and in helping others understand how a "system of care" works to benefit all patients.

Dr. Liebow recently retired from active medical practice, but not from his interest and involvement in EMS. In addition to helping with the most recent update to the EMS treatment protocols, he is actively involved in the establishment of the state EMS Memorial.

### Carol Pillsbury, EMT-P, West Farmington

EMS has been Carol's vocation, her passion, and her commitment for nearly three decades. From the beginning, she has worked tirelessly to advance her own education and to provide innovative instruction to others. She strives to set very high standards for both herself and her students. In fact, one of her former students confessed to being terrified when he first met Carol, but rapidly transformed to recognizing her as a dear friend and mentor.

Carol served on the Board of EMS for 10 years, including as Board chair, and chair of the Investigations Committee. In every role, Carol's goal was to support a system and a profession that would be fully ready to respond and provide the best possible care for the patient. She was always willing to ask the tough questions, and was the first to raise her hand when something needed to be done – and by her many activities has improved the lives of many people throughout Maine.

## LIFETIME ACHIEVEMENT AWARDS

### Craig Bowden, EMT, Bucksport

Craig has served the people in and around Bucksport for over 30 years, most recently as the Bucksport Fire Chief and Ambulance Director. Craig has impressed his many colleagues and friends with his energy, his talents, and his ability to be aware of the bigger picture and find ways of providing compassionate care that are not found in training manuals. What makes him exceptional is his three decade commitment to helping others, whenever and wherever needed.

### Bruce Cook, EMT-I, Burnham

Bruce has been actively involved with EMS for over 20 years, most recently serving as the Chief and primary instructor of Unity Volunteer Ambulance. Bruce's call sign, "Unity 101" is often heard signing on whenever the call for help goes out, regardless of the time of day or nature of the call. Those who have worked with Bruce over the years have praised his calming effect on patients, especially children. When he arrives on the scene, patients of all ages know that they are in good hands.

### Percy Thibeault, EMT-P, Frenchville

This past February, Percy retired from Madawaska Ambulance after 30 years of service. During this time he has served as a provider, the service chief, and generally doing whatever else needed to be done. In addition to Madawaska Ambulance, Percy has served as a police officer, regional council representative, and very active instructor. His commitment to his community also includes serving on the school board and as a selectman in Frenchville. To his many friends and colleagues, he is known, admired, and respected for his lifetime dedication to Aroostook County and the St. John Valley.





## Annual Award Recipients

*(L-R): Commissioner Anne Jordan; Chief Wayne Werts, Board of EMS Chair; Carol Pillsbury, EMT-P, Farmington; Percy Thibeault, EMT-P, Frenchville; Gerry Pineau, EMT-I, Lewiston; Bruce Cook, EMT-I, Burnham; Dr. Paul Liebow, Bucksport; Chief Craig Bowden, Bucksport; Jane Lincoln, Governor Baldacci's Chief of Staff.*

## EMS MERIT AWARDS

### Freeman Dyer, EMT-P, Fort Fairfield

Freeman began his service to others as a volunteer firefighter in Fort Fairfield. It was there that he caught the "EMS bug" and in 1983 completed his EMT training. He went through the ranks and became a paramedic in 1992. During his time in Fort Fairfield, he was instrumental in developing fire/injury prevention programs and fostering cooperative working relationships with other fire/EMS departments and the local media. For the past 20 years, Freeman has worked for Crown Ambulance and experienced his own personal challenges as well. Although he is no longer working on an ambulance, he is still active with Crown Ambulance and continues to inspire others with his compassion. As one of his colleagues stated, "Freeman exemplifies the best of what EMS is all about, and the importance of service to others."

### Gerard Pineau, EMT-I, Lewiston

For over a decade, Gerry has been involved with EMS in the Lewiston-Auburn area. In addition to responding to calls with United Ambulance, he has taken on a key leadership role in the development of Tri County's Mass Casualty Response Plan. Gerry will be the first one to say that such a project requires the active involvement of many others, but being successful also requires a leader who understands the importance of working with many different departments and disciplines. It is in this role that Gerry has excelled. Those who have worked with Gerry credit his inviting personality, his keen sense of humor, and even his occasional cynicism as helping to assemble this plan, and a team of providers who are ready, willing, and able to respond and work as a well organized team.



## AED Provided by Maine EMS and Rural AED Grant Saves New Sharon Man

*Nick Nichols from New Sharon talks about the day his father, Bob Nichols, experienced a heart attack while flying an ultralight plane. Looking on are (L-R): Jay Bradshaw, Commissioner Anne Jordan, and Chief of Staff Jane Lincoln. Nick was at the scene when his father landed the plane and went into cardiac arrest. He called 9-1-1, and began CPR. A few minutes later, Franklin County Deputy (now Maine State Trooper) Aaron Turcotte, defibrillated Bob Nichols with an AED obtained through Maine EMS and the federal Rural AED Grant. When NorthStar paramedics arrived on the scene, Bob had a pulse and received ALS treatment enroute to Franklin Memorial Hospital. Bob was then transferred by LifeFlight to Maine Medical Center where he received additional treatment and made a full recovery. Bob was unable to attend the ceremony because he took the day off to go ride his Harley in western Maine!*

# MAINE EMS TEAM LEADERS

Ever wondered who to call when you have a question, complaint, concern or compliment about your EMS system? Listed below are the members of the Maine EMS Board, Maine EMS Staff, and the Regional Coordinators and Medical Directors. Each and every EMS team member in Maine is encouraged to get involved with how your system is run. So get involved—give us a call!

## Maine EMS Board Members

Southern Maine EMS Rep	Ron Jones, EMT-P	23 Sterling Drive, Westbrook, ME 04092	TEL: 854-0654
Kennebec Valley EMS Rep	Tim Beals, EMT-P	PO Box 747, Waterville, ME 04903	TEL: 872-4000
Aroostook EMS Rep	James McKenney, EMT-P	229 State Street, Presque Isle, ME 04769	TEL: 768-4388
Tri-County EMS Rep	Lori Metayer, RN, EMT-P	3 Woodland Avenue, Lisbon Falls, ME 04252	TEL: 353-4546
Northeastern EMS Rep	Paul Knowlton, EMT-P	274 Pearl Street, Bangor, ME 04401	TEL: 941-5100
Mid-Coast EMS Rep	Steven E. Leach, EMT-P	PO Box 894, Union, ME 04862	TEL: 785-2260
Physician Rep	Peter DiPietrantonio, DO	4 Picnic Hill Road, Freeport, ME 04032	TEL: 373-2220
Nurse Rep	Geneva Sides, RN	PO Box 287, St. Albans, ME 04971	TEL: 487-5141 x269
First Responder Service	Richard Doughty, EMT-P	4153 Union Street, Levant, ME 04456	TEL: 941-5900
Emergency Medical Dispatch	James E. Ryan, Jr.	62 Main Trail, Hampden, ME 04444	TEL: 570-3773
For Profit Service	VACANT		
Not For Profit Service	Bob Hand, EMT-P	100 Hill Street, So. Paris, ME 04281	TEL: 890-6350
State Medical Control Director	Steven E. Diaz, MD	Maine EMS, 152 State House Station, Augusta, ME 04333	
Hospital Rep	Judy Gerrish, RN	891 West Main Street, Suite 400, Dover-Foxcroft, ME 04426	
Municipal EMS Service Rep	Wayne Werts, EMT-P, Chief	Auburn Fire Department, 550 Minot Avenue, Auburn, ME 04210	TEL: 783-6931
Fire Chief Rep	Roy Woods, Chief	Caribou Fire Department	
Public Rep	VACANT		
Public Rep	Ken Albert, Esq., RN	12 South Ridge Lane, Lewiston, ME	TEL: 777-5200

## Maine EMS State Office Staff

152 State House Station,  
Augusta, ME 04333-0152  
TEL: 626-3860 | FAX: 287-6251  
maine.ems@maine.gov  
www.maine.gov/dps/ems

**Jay Bradshaw, EMT-P, Director**  
jay.bradshaw@maine.gov

**Drexell R. White, EMT-P, EMD Coordinator**  
drexell.r.white@maine.gov

**Jan Brinkman, RN, EMT-P**  
Training and Education Coordinator  
jan.brinkman@maine.gov

**Dawn Kinney, EMT-P, Licensing Agent**  
dawn.l.kinney@maine.gov

**Alan Leo, EMT, Licensing**  
alan.p.leo@maine.gov

**Ben Woodard, EMT**  
EMS Data and Preparedness Coordinator  
ben.woodard@maine.gov

**Karen Cutler**  
Administrative Assistant  
karen.m.cutler@maine.gov

## Regional Coordinators and Medical Directors

REGION 1    Donnell Carroll, Southern Maine EMS Council    Dr. Anthony Bock, Medical Director  
496 Ocean Street, South Portland, ME 04106  
TEL: 741-2790 | FAX: 741-2158 | smems@smems.org

REGION 2    Joanne LeBrun, Tri-County EMS Council    Dr. Kevin Kendall, Medical Director  
300 Main Street, Lewiston, ME 04240  
TEL: 795-2880 | FAX: 753-7280 | lebrunj@cmhc.org

REGION 3    Rick Petrie, EMT-P, KVEMS Council    Dr. Tim Pieh, Medical Director  
71 Halifax Street, Winslow, ME 04901  
TEL: 877-0936 | FAX: 872-2753 | office@kvems.org

REGION 4    Rick Petrie, EMT-P, Northeastern Maine EMS    Dr. Jonnathan Busko, Medical Director  
EMCC, 354 Hogan Road, Bangor, ME 04401  
TEL: 974-4880 | FAX: 974-4879 | neems@emcc.org

REGION 5    Steve Corbin, Aroostook Maine EMS    Dr. Jay Reynolds, Medical Director  
111 High Street, Caribou, ME 04736  
TEL: 492-1624 | FAX: 492-0342 | aems@mfx.net

REGION 6    Bill Zito, Mid-Coast EMS    Dr. David Ettinger, Medical Director  
Thompson Community Center  
Routes 131 and 17, PO Box 610, Union, ME 04862  
TEL: 785-5000 | FAX: 785-5002 | office@midcoastems.org

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